

## General -- OSC

### What worked well?

· This was the **most organized well executed response** I have been involved with, everyone was a team player. For the most part the size of the response was appropriate. Everyone “stayed in their lanes” which was the reason for the good organization. As a **LSC I really liked having the “resource person” under Logs** – it really improved communication and efficiency. I believe that Regions 6 and 7 work well together and hope that R6 feels the same way.

· **Coordination** with JFO SME contacts in Austin and team leader in Houston **was excellent**. There was constant communication with REOC contact in Dallas.

· People at the **IMT were flexible** and would take documents by email and if email didn’t work they would take the info on thumb drives or even a hard copy and then re-enter the information.

· Overall, **everything seemed to work pretty well**. Having members from the **NIMAT** provided some good networking and different ways of thinking opportunities.

· **Line of command, and ease of communication because IC and Regional Mgmt interfacing throughout**

· **Information flowed** up and down well

· **Sharepoint and R6Harvey Boxes** are great

· **Integration of other Regions (R7)** into the response

· **START** contractors great help

· Humor and positive **attitude**

· **213RR process**

· **Mobe and Demobe was smooth**. Daily ops ran well despite added pressures. Individuals in **ICS positions** (e.g. chiefs and higher) were **well-trained and knowledgeable**. They accomplished much with relatively few resources.

**GEN** · Although we did not follow the structure and deployment plan as laid out in the **PIAT Concept**  
**CIC** **of Operations**, what we did worked extremely well. The most important thing we did right was to have each position two deep. This not only allowed for backups, it also added the synergy of two experienced people. The chemistry and competence of the team was fantastic and they accomplished every challenge quickly and professionally.

**GEN** · The **N-IMAT PIO was a valuable resource**. The R6 PIO Assistance Team worked really  
**CIC** well—very helpful in the early days of deployment.

GEN CIC	<ul style="list-style-type: none"> <li>Although we did not follow the structure and deployment plan as laid out in the <b>PIAT Concept of Operations</b>, what we did worked extremely well. The most important thing we did right was to have each position two deep. This not only allowed for backups, it also added the synergy of two experienced people. The chemistry and competence of the team was fantastic and they accomplished every challenge quickly and professionally.</li> </ul>
GEN CIC	<ul style="list-style-type: none"> <li>The <b>N-IMAT PIO was a valuable resource</b>. The R6 PIO Assistance Team worked really well—very helpful in the early days of deployment.</li> </ul>
	<ul style="list-style-type: none"> <li>There were many <b>experienced people who worked on this</b>, and their ability to adapt and be flexible was impressive.</li> </ul>
	<ul style="list-style-type: none"> <li><b>IC Martin's</b> calm demeanor and respect for the IMT was great.</li> </ul>
	<ul style="list-style-type: none"> <li>Everyone in the <b>IMT</b> I was deployed with <b>worked well together and supported each other</b>. This was my first deployment, and the more experienced people offered tips and advice that were very helpful.</li> </ul>
	<ul style="list-style-type: none"> <li><b>IAP</b> (Planning section was great throughout my deployment), <b>Health and Safety</b> (Great job to David Eppler), <b>Command/Control</b> (Great job to John Martin, Nick, and Gary Moore), <b>Process</b> (logistics, docs, finance), <b>level of response</b> (good job staffing up as needed, shuffling individual Ops teams to meet needs, and demobing when tasks were completed).</li> </ul>

## What is an area of concern?

RESOURCE ORDERING (REOC -- FIELD)	
LOGS	REOC sending <b>staff and resources to field without notification</b> of IC, OPS or branch directors –
PLAN	especially <b>CICs</b> who were sent with little to no direction or tasks

MOBILIZATION / DEMOB (LOGS, REOC, PLAN)	
LOGS	<ul style="list-style-type: none"> <li><b>Mobilization/De-mobilization</b> - The Mob document was too wordy and should be made clear and to the point with only that information that responders need. The overhead de-mob process should be included the mob document so individuals know up front what will be expected of them. I think a <b>mob/de-mob template</b> could be developed that could easily and quickly completed --- if specific information is required for specific groups that can be provided through an addendum document.</li> </ul>

<b>PLANS</b>	<ul style="list-style-type: none"> <li>Response <b>Check-in</b> may have been an issue. I tracked the 213RR orders – I order people but was <b>not given official notification</b> that they had arrived – I closed orders assuming that the order had been filled.</li> </ul>
<b>LOGS</b>	<ul style="list-style-type: none"> <li>Make sure people going to field have <b>mobilization/demobilization package</b> to include: Where to report, who to report to and when; Some sort of Identification beyond ID Card – lots of people out there, why would people believe we are from EPA – include contact information for people – who to call; Timekeeping – How do we handle OT and codes; Phone/photo rules; Check-in and Check-out</li> </ul>
<b>LOG</b>	<ul style="list-style-type: none"> <li>Increased costs lodging in <b>Charlie trailers yet driving significant miles to report to Bravo. Work codes</b> were not provided in a timely manner thus leading to a significant delay in our overtime pay.</li> </ul>
<b>FIN</b>	Getting information on <b>deployment</b> . Was told verbally a certain day was my travel day but did not get <b>email with information</b> until my travel day. Related to the above deployment. Was told and email on deployment indicated there were procedures for getting a <b>TA, OT request submitted and approved and pay cap waiver</b> . Account codes given one code early on for time worked at the JFO under a Field Operations Support MA. However, when the codes were updated with the end of the 100% FEMA, there was no longer a separate code for FOS MA charging which is 0% state share.
<b>REOC</b>	<b>Mobilization and planning for mobilization</b> was poor. Apparently the decision to send <b>observers</b>
<b>LOGS</b>	was made on 9/13 and <b>inspectors</b> were verbally informed, however mobilization instructions were not received until the afternoon of 9/15, and draft TA was not issue until after general working hours on 9/15, for a deployment on 9/17. I was told around noon on the 15 that I was not on the deployment list only to be told 15 minutes later that I was indeed on a deployment list that the REOC staff member did not see until he rechecked with others.

## CONTRACTURAL ISSUES (FIN)

## REPORTING

ESTABLISH Battle Rythem First

## COMMUNICATIONS

GEN	·	<b>Communications</b> , in general, did not seem to be as good as during past incidents. It's hard to
PLAN		put a finger on it, but communications between groups never really seemed as smooth as prior
REOC		events. Perhaps, although beneficial in many ways, presence of the non-R6 <b>NIMAT</b> folks disrupted the 'normal' R6 flow/atmosphere we're used to. That flow never seemed to be gained even in their absence. The <b>EU never really worked with the Planning Section</b> . The EU was rather isolated (for better or worse). There were also a couple of incidences where <b>data</b> was being gathered without the EU knowing anything about it.
PLAN?	·	Several times being directed to <b>attend meetings or calls</b> and person giving the direction having
REOC?		no idea of call-in numbers, rooms, time, or who to ask to obtain the information.
	·	COMMUNICATION: There was very limited and not very <b>timely dissemination of critical information</b> .

## "DISASTER" RELATED NRC REPORTS

## SENIOR OSC vs NEW OSC PERSPECTIVE

## IMT ACTIVATION - were they ready and how did they work

## IMAT Assistance - Utilization

GEN	·	I noticed a need for the <b>IMAT</b> to cover a newer function within the IC, which is that of the
REOC		<b>USCG photographers</b> . They were a great resource, but when I arrived they were <b>listed as PIOs</b>
CIC?		throughout the branches, which I found to cause a lot of confusion and took days to clarify their roles and duties to folks within the structure.

## DID WE UTILIZE OUR OSCS Properly? Planning, DATA Management, NRC Reports, JFO, SOC

- Training = We need **better training of response manger** and more hands on training when hurricane season starts. The one hour powepoint overview presentation does not work.

GEN	· An area of concern is coordination w/partners, (FEMA). <b>FEMA providing information to</b>
REOC	<b>residents with little or no knowledge of the information or problem.</b> FEMA claims they have
CIC?	someone at the centers doing the same work EPA is doing. Information flow to impacted residents be conducted at FEMA center after consultation with local officials. Incorrect personnel with no site work experience and no basic community involvement training. Residents asked water, indoor air and yard cleanup questions.
· Meeting the <b>perceived expectations of EPA upper mgmt.</b> to make response activities larger than actual situation required (NDOW developed to ensure cost efficiency)	
· <b>IMAT – who orders, who pays – communications between IMT and IMAT lacking</b>	
· Seem like this was a much more <b>political response</b> than before – seemed very different	
· <b>Senior Leaders</b> appeared to not have a grasp or disregarded mission assignment processes. Much of the taskings were not related to the mission and drained key resources needed to accomplish mission-related tasks. Others in senior leadership positions did not have a grasp for leading teams.	
GEN	· Logistics - ( <b>power for the TAGA mobile laboratories and appropriate lodging for the</b>
REOC	<b>personnel</b> ) outside of the Houston area were not available when we were required to travel.
GEN	· Timing – when moving to the new assignment areas, <b>not much consideration was shown for</b>
REOC	<b>the timing that is required to move the laboratory and personnel.</b>
GEN	· <b>Limited trained staff for the TAGA operations.</b>
REOC	
GEN	· Working in <b>Unified Command</b> with three branches, two <b>not co-located</b> with Unified Command.
REOC	<b>Assistant PIO's in other branches</b> would be recommended in the future for a large response. We
CIC?	met that need and staffed accordingly, but just more of a lessons learned.

**GEN** · Having **Unified Command**, three branches, as well as the EPA REOC and EPA EOC, brought  
**REOC** unique challenges. I had a grasp of my responsibilities of who to share what with within EPA but  
**CIC?** found it difficult getting explaining and getting “**buy-in**” from other agencies within the **Unified Command** who expected to see more of a strict “within” Unified Command review-release process for distribution of communications materials, statements and responses.

· Since we were Federal employees working in an official capacity, I think some thought should be given to whether it’s appropriate to wear **politically-oriented hats and t-shirts** (Make America Great Again)—as well as religious t-shirts.

## LOGISTICS

### What worked well?

- Having the **PRL in Logistics** with the lodging coordinator and deployment letter specialist works well.
- The USCG was very gracious in opening their facility to us, and once we were located in nearby hotels it was a great location. **Demobilization** was very smooth. There were no safety concerns for me personally. Having an **EPA issued smart phone** made my life easier because I could easily retrieve email and used the device for navigation. Others were issued flip phones and ended up using personal devices for navigation.
- The Region 7 travel, REOC, and logistics staff were very helpful and responsive. I also easily got into the FOH for H and S.
- The trailers in Beaumont, Texas were very nice. o **TA/Travel issues – great help from R6 Staff**

### What is an area of concern?

#### RESOURCE ORDERING

#### REGIONAL EQUIPMENT INVENTORY (adequate type and quantity)

#### WAREHOUSE CONTRACT UTILIZATION

- LOGS** · **Mobilization/De-mobilization** - The Mob document was too wordy and should be made clear and to the point with only that information that responders need. The overhead de-mob process should be included the mob document so individuals know up front what will be expected of them. I think a **mob/de-mob template** could be developed that could easily and quickly completed --- if specific information is required for specific groups that can be provided through an addendum document.
- PLANS** · Response **Check-in** may have been an issue. I tracked the 213RR orders – I order people but was **not given official notification** that they had arrived – I closed orders assuming that the order had been filled.
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<b>LOG FIN</b>	<ul style="list-style-type: none"> <li>Increased costs lodging in <b>Charlie trailers yet driving significant miles to report to Bravo. Work codes</b> were not provided in a timely manner thus leading to a significant delay in our overtime pay.</li> </ul>
<b>FIN LOGS?</b>	<p>Getting information on <b>deployment</b>. Was told verbally a certain day was my travel day but did not get <b>email with information</b> until my travel day. Related to the above deployment. Was told and email on deployment indicated there were procedures for getting a <b>TA, OT request submitted and approved and pay cap waiver</b>. Account codes given one code early on for time worked at the JFO under a Field Operations Support MA. However, when the codes were updated with the end of the 100% FEMA, there was no longer a separate code for FOS MA charging which is 0% state share.</p>
<b>REOC LOGS</b>	<p><b>Mobilization and planning for mobilization</b> was poor. Apparently the decision to send <b>observers</b> was made on 9/13 and <b>inspectors</b> were verbally informed, however mobilization instructions were not received until the afternoon of 9/15, and draft TA was not issue until after general working hours on 9/15, for a deployment on 9/17. I was told around noon on the 15 that I was not on the deployment list only to be told 15 minutes later that I was indeed on a deployment list that the REOC staff member did not see until he rechecked with others.</p>
<b>LOGS PLAN</b>	<p>REOC sending <b>staff and resources to field without notification</b> of IC, OPS or branch directors – especially <b>CICs</b> who were sent with little to no direction or tasks</p> <ul style="list-style-type: none"> <li>The <b>trailers</b> are not designed for two adults. I was the second person in the trailer. I tried the bottom bunk but it was hot with no air vent. I tried the sofa but it was short and not good either. I tried the upper bunk but the cushion intended to be a mattress was harder than the lower bunk. Additionally, the upper bunk had nothing to hold onto when climbing down the stairs and was a safety hazard. Climbing up was okay but down was dangerous. Additionally, exiting the trailers was troublesome as well as the handhold was not helpful when exiting the trailer. I landed wrong and hurt my foot. It was a mild injury but further shows the <b>safety limitations of trailers</b>. After three nights of very little sleep my roommate offered to switch with me giving me the queen bed. The Coastguard had hotel rooms and I suggest we utilize <b>hotel rooms</b> so responders can get real rest. If trailers must be utilized with double occupancy, then trailers with two queen beds need to be procured.</li> <li>First <b>hotel assigned was too far away</b> and traffic issues after a long day and being tired is unsafe. <b>Vehicle break-in and stolen gear</b></li> </ul>



- Personal cell phones were best way to communicate in the field. But, we don't want them FOIAble, so perhaps **issued cell phones**.

- I don't like **R6 lodging policy** was moved from a hotel that was closer and cheaper; the parking and restaurant was cheaper than the one I was told I had to stay in... it was a nice enough hotel but, had to fight more Houston traffic to get where I needed to go, ....

- There were several technical challenges with **remote operation**. **Printers** were not set up for everyone's computer so when operational or planning documents were needed for meetings there were delays in getting a hard copy for discussion. Additionally, the internet would go down and connection to the **EPA network** would be lost and several attempts were necessary to get back in to use EPA mail system. Again this resulted in delays in information reception and dissemination.

- Logistics = Did not understand why water field staff were **staying in Katy, Texas, when they were needed in the Webster, Conroe area**.

- A **separate logistics contract is needed from HQ to help support responders**. Regions can't plan adequately for their routine needs and an unknown event like a Hurricane. Lodging and supply support are the two most critical needs

- We need to include a **travel specialist to the LOGS team**. Not having a travel expert that can assist and answer questions of our travelers was a problem.

- The value of using **PRL** is diminished when we don't track contractors with it.

## Finance

### What worked well?

The **FSC answered all my questions** related to my TA, voucher, and pay cap waiver. Information flow seemed like it went well to me. No issues or concern

### What is an area of concern?

#### WAREHOUSE CONTRACT UTILIZATION

#### START and ERRS CONTRACT CAPACITY/ZONE CROSSOVERS

#### HR/FINANCE/MISSION ASSIGNMENT ISSUES

Still not sure about **OT waiver** – the amount of OT allowed and required exceeded the maximum pay ceiling, and I'm not sure if that will ever get paid to me.

Few people, if any, remembered **hotel tax exemption forms**. We were told we can't submit our vouchers with the tax on it. We have to work retroactively with the hotels to get a reimbursement (hopefully).

Not having and/or understanding **time reporting** until the very end during the deployment right when we had to submit it.

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## REOC

### WHAT WORKED WELL?

All of the personnel in the **REOC worked very well together**. I was very impressed with their **knowledge**.

**Great space in Dallas**, ability to have internet and intranet, ability to display DITRA files and plums for ICs

**R6 support to N-IMAT and our roles was excellent**

Coordination from **R6 Env. Unit** was appropriate and correct

### WHAT IS AN AREA OF CONCERN?

**UTILIZATION of THE REOC**

**UTILIZATION of RSC** (including statistics such as percent of Regional RSC utilized and activation and deployment procedures

**UTILIZATION of KLP IMT positions** (including statistics of Regional KLP members)

**ESTABLISHMENT of the Regional IMT**

**UTILIZATION of recent ICS Institute attendees**

**NEED for additional ICS training** Coordination/communication with REOC and Inter-Agency venues (SOC, JFO, RRCC, and NRCC)

**Coordination with state response partners**

**DATA Management**

**REOC LOGS** **Mobilization and planning for mobilization** was poor. Apparently the decision to send **observers** was made on 9/13 and **inspectors** were verbally informed, however mobilization instructions were not received until the afternoon of 9/15, and draft TA was not issue until after general working hours on 9/15, for a deployment on 9/17. I was told around noon on the 15 that I was not on the deployment list only to be told 15 minutes later that I was indeed on a deployment list that the REOC staff member did not see until he rechecked with others.

**LOGS** REOC sending **staff and resources to field without notification** of IC, OPS or branch directors –  
**PLAN** especially **CICs** who were sent with little to no direction or tasks

**(GEN)** · I did not deploy. I was ready to, but Region 6 **cancelled my deployment** along with many others from **region 8** who were ready to go. That may be a good input for hotwash on getting organized on who you need or don't need. Don't put in WebEOC that you need them and then cancel. I moved several appointments to be ready to deploy. Thanks

(GEN) · Coming on board to the response in Mid-October, I was most frustrated with how the **communication** and back and forth was handled. I understand things change frequently, however, but it was frustrating to pack a week in advance only to be on hold, and then asked to deploy and have to get everything put together on a Friday. At one point my regular supervisor asked if I could leave that night...so I was given the impression that **deployment** was imminent. I know that certain aspects are going to be in a continuous changing process, so I will definitely get over this. One item that I believe could be fixed fairly easily is the **H&S Clearance**. A few people I know (including myself) had their deployment almost delayed due to H&S Clearance issue well into the response. For me it was my fit test (required for my H&S but not for this response). My suggestion would be to work with the H&S Office earlier in the response to have the RSC Members and others that have volunteered to be cleared by H&S for potential future deployment. While I understand this may create more work for the H&S Office, it would also allow additional time for individuals to be cleared for deployment rather than getting fit tested in **Addison at 3:00 pm on a Friday so they can fly out on Sunday** (like what happened to me). It was also frustrating to be given changing directions at different points during the response. Several emails for PP+, conflicting instructions on who was making **TAs, and accounting codes** for flights, things were changing more frequently than what it seemed like it should. For some of these things, it would seem like FAQs could be developed that would be standard for all Emergency Responses. **A standard Demob Form**. What to do if your dates change and how to handle Travel Management Price changes for airlines when they change dates. Things of that nature. Who to contact for different situations, etc. Lastly, we should never upgrade our accounting system in the middle of a response (PP+8.9 to PP+9.2). Also something none of you have control over J.

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REOC events. Perhaps, although beneficial in many ways, presence of the non-R6 **NIMAT** folks disrupted the 'normal' R6 flow/atmosphere we're used to. That flow never seemed to be gained even in their absence. The **EU never really worked with the Planning Section**. The EU was rather isolated (for better or worse). There were also a couple of incidences where **data** was being gathered without the EU knowing anything about it.

GEN REOC	· Logistics - ( <b>power for the TAGA mobile laboratories and appropriate lodging for the personnel</b> ) outside of the Houston area were not available when we were required to travel.
GEN REOC	· Timing – when moving to the new assignment areas, <b>not much consideration was shown for the timing that is required to move the laboratory and personnel.</b>
GEN REOC	· <b>Limited trained staff for the TAGA operations.</b>
REOC	· <b>Long-range staffing</b> was being worked, but <b>should start on day one</b> (this happens on most incidents). Region 6 staff were exhausted too early and then were playing catch up with respect to rest, energy, and other normal job duties that don't go away.
	Getting <b>timely responses back from the REOC</b> when FEMA has a short deadline on a request.
	Dealing with a request to “ <b>sample all private water wells</b> ” and be told ad nauseam what a bad idea it was by all parties.
	Lack of <b>Command/Control</b> in REOC
	<b>Information</b> did not flow through REOC
	“ <b>Top Heavy</b> ” <b>Response</b> – more people in REOC than in field – 24 hr in REOC when field never needed it also it was extended well past being needed
	Knowing who was in the <b>line of command at the beginning</b> was confusing as well as knowing our expected <b>daily report/end times</b> . Assignments sometimes seemed duplicated and communication thereof lacking. Some positions had multiple staff members early on while others didn't. Even though KLPs may have attended the necessary trainings, it may work best to have an <b>experienced member on-hand for “on the job training” for the first time in the hot seat</b> . It is a very different beast going from book training to “real life”. It was also confusing dealing with the <b>HQ EOC</b> . <b>In training, we had steps/processes that we should follow and it became confusing and frustrating when the EOC became involved and the processes morphed very quickly.</b>
	<b>Information flow from field</b> situation/ situ updates ( <b>Arkema</b> ) was not timely at the beginning, but improved in a few days. Steady and time critical information flow channels establishment is very important and critical during IMAAC modeling in real life responses.

**GEN** · Working in **Unified Command** with three branches, two **not co-located** with Unified Command.  
**REOC** **Assistant PIO's in other branches** would be recommended in the future for a large response. We  
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**CIC?** throughout the branches, which I found to cause a lot of confusion and took days to clarify their roles and duties to folks within the structure.

**REOC** · It seems like the only way to **get information to the public** in the early days of a disaster is with  
**CIC** flyers distributed by outreach teams. Getting up-to-date material printed and into the hands of the people who need to distribute it is a constant problem. Also, there are **restrictions on the amount of material that can be printed** due to rules that make scene under normal operations, but are major barriers when people's lives are at stake. There were also delays getting approval for out-of-date material that had to be updated and approved.

**REOC** · In a **disaster, we need a mobile printing plant** with either GPO personnel who can print what  
**CIC** we need as we need it, or a **waiver from unrealistic rules** that make no sense during a disaster. The mobile printing plant needs a generator that can power printing equipment even if there is no power, which seems to be the norm in most disasters. If we can't arrange a mobile printing plant, then there needs to be one in place in the mobile command post with all printing waivers in place. There also needs to be a requirement for annual review of all disaster-related material that might be needed during a disaster or emergency. **Keeping material up-to-date should be part of ongoing training for PIAT members.**

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work experience and no basic community involvement training. Residents asked water, indoor air  
and yard cleanup questions.

## PLANNING

### What worked well?

- The overall process worked well. I was able to respond as a slightly different position and was able to learn how to be a SITL to better my overall IMT skills.
- The IAP helped with understanding each person's assignments and the contact information was useful when people needed information.
- mobilization and demobilization went smoothly. The IAP always arrived timely.
- IAPs were readily available for each operational period. Staffing level of the ICP was appropriate. The mobilization process was efficient. Experienced responders answered questions and provided technical guidance. The duties of the SITL position was divided between EPA and the Coast Guard.

### What is an area of concern?

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- Need for pre-scripted 213RR for infrastructure
- Getting a daily SitRep and IAP – never got an IAP. The IAP would have been helpful to fill out contact info on daily 204s. SitRep would have been nice very early on to see what was/was not being reported and how.
- The numbers of personnel coming and going from the incident was difficult to track. Some forgot to sign in at the ICP and others went directly into the field to do their work. While the IAP generally had good numbers of people the sit rep info, especially for the State organizations was difficult to track. Some of the people from the State of Texas were working from TCEQs office on Harvey related tasks and were difficult to account for.
- Sit Reps and inputs are not good – coordination with partners to get field info not working
- Few 214s were submitted to the SITL. Information provided via 214-Bs were sometimes vague and lacked detail. Also, photo documentation of activities occurring in all three operational branches was inconsistent. A discussion of the PIO collecting and submitting photos instead of the SITL occurred but a determination of reassigning the task was not made. In addition, a lot of follow-up was required which proved to be challenging because field operations had completed by the time the information was submitted.
- SitReps did not document/tell a complete story of the daily operations and accomplishments. Also, it caused delays in submitting the report by 9p. As a result, the deadline was moved to 10:30p. Feedback on the content of the SitReps was used to improve the quality of the reports.

Since the demobilization process was confusing, the number of personnel on site was often inaccurate. This number was included in the daily SitReps.

- plans staff need training soliciting, extracting, and distilling field information for the non-field/non-tech/political leader-type reader (sitreps and management reports). There was a lot of wasted time and energy providing information that was not important to certain readers in the daily report.

FOB

## CIC

### What worked well?

Having someone in place that was familiar with the area and community members was a huge plus. Having a MiFi hotspot was priceless. Having a background in working with communities was an added plus. Reaching out to communities that are often over looked, attributed to a background in Environmental Justice.

The CL's resilience, flexibility, and adaptation to the challenges of executing our roles with rather limited resources and very little structure.

This was the first incident for the PIAT to be activated. The organizational structure of the PIAT seemed to work well, and the community liaisons were well received and useful ambassadors for EPA information.

Once we were assigned our mission (disseminate fact sheets to the locals within the community) we didn't complain about the task and successfully accomplished our goal. I truly believe the work we did increased the public's knowledge about EPA in a positive way which was reflected in the meeting with industries, I participated in, as well as the community. Everyone I saw and greeted complimented and even gave me a hug once they learned I worked for EPA. These were really proud moments.

The overall goal and mission of the Community Liaison Initiative was met and the activities were very successful. My team met with several local government officials, business owners, community leaders, non-governmental organizations, and staff at FEMA disaster recovery centers who were very appreciative of our presence and the information we provided them. Getting EPA liaisons out in the affected communities, communicating with clients, local officials, and community based organizations, and providing information pertinent to impacted homeowners/shareholders was in and of itself an important aspect of EPA's Harvey response.

Team concept. Allowing CL to make decision in the field as to where to go next and who to contact.

Delivering the informational resources electronically to the official who could distribute them to the community.

Because we were remote, the daily calls with the CL team leaders provided some guidance to what we would be doing.

Many of the citizens we talked to thanked EPA for their work. Some said we were the first EPA person they had ever met and I think that the CLs in some way by being present helped with the public perception of the agency.

Sending CL Co-Leads to the three areas (late in the game) was a good move to manage the areas hard hit by the hurricane.

Many of the CLs deployed early in the response were self-motivated and were able to organize the operation on the ground.

Working in teams with an experienced field person on each team. While this may not have been planned or possible at all locations it did work out for us in the Beaumont-Port Arthur area.

I feel like working as a community liaison worked well. We served about 18 counties in the Corpus Christi area. It allowed EPA to have some “boots on the ground.” We were able to see and hear the concerns of the community and relay those concerns up the chain of command. Passing out information is certain high traffic, high visibility and key areas such as: EOCs, DRCs, city planners, libraries, city halls, churches, volunteer camps and community feeding areas was a huge. It allowed us to reach out to many people.

**GEN** · Although we did not follow the structure and deployment plan as laid out in the **PIAT Concept**  
**CIC** **of Operations**, what we did worked extremely well. The most important thing we did right was to have each position two deep. This not only allowed for backups, it also added the synergy of two experienced people. The chemistry and competence of the team was fantastic and they accomplished every challenge quickly and professionally.

**GEN** · The **N-IMAT PIO was a valuable resource**. The R6 PIO Assistance Team worked really  
**CIC** well—very helpful in the early days of deployment.

**What is an area of concern?**

**CIC** · **EJ institutionalized regionally as part of ICS.** To better engrain EJ predictively, I suggest making it explicit as part of the Red, White, and Blue Teams make-up. There are different ways to do it - to illustrate, here is one way:

Add **Asst. EJ LNO as a uniquely distinct function part of RICT** – this function is in addition to the already described ASST. LNO, and would equally report to the Liaison Officer (Train the Liaison Officer to expressly and effectively accept EJ responsibilities as part of regular Liaison duties); Identify and place EJ operable functions with a limited number of positions, such that staff can be pre-assigned and ready for field deployment at a moment's notice, maintaining ongoing full level of readiness (meeting all health, safety and other requirements) (1) Train the limited number of staff filling pre-assigned positions, sensitizing those staffs on EJ to operate effectively, (2) Work with OEJTIA to assist accomplishing the above suggestions, incorporating, printing and distributing the changes as appropriate; and (3) Test the changes during the next exercise.

Having Community Liaisons that are not familiar with working with the public speaking to community members.

Allowing Community Liaisons take the lead in roles they were not required or asked to do. For example, adding a 4pm conference call when an 8am conference call had already been established. Keep in mind there were some groups that were commuting for hours at a time to and from their assigned locations each day. If you allow an hour in the morning and an hour in the afternoon in addition to commute time, how much time would be left to assist communities.

Hearing groups report that there was no more work to be done in a particular location. Maybe a checklist should have been provided to ensure that every rock had been overturned of key stakeholders to reach out to in each community.

I wish there had been better coordination between EPA, FEMA, State, and Local entities to allow community liaisons to provide a broad packet of information that would include local and state information on debris management, volunteer protection (H&S), and other documents that we found were available on-line and at some distribution points. I think this would have saved a lot of federal, state, and local resources since we were on the ground and distributing information, and would have made us more effective and helpful to those affected by the disaster. I also wish there would have been more flexibility being able to develop or at least find and distribute additional guidance we found necessary throughout the process. A more flexible and responsive approval system would have made us much more effective. We did not have enough handouts to distribute and since there was no flexibility to allow us to make copies locally, we were forced to request e-mail information from people to send them information later. A lot of affected people got very upset at that point since they had no home, were living in tents in some cases, and had no access to the internet and no way to charge their phones on a regular basis. They felt that we were completely out of touch with their situations and I felt like I was pouring salt in their open wounds.

Level of Response – I think the level of response was ok, but the community liaisons should have been on the ground within a couple of days of the disaster. We ran into a lot of people who said they would have loved to have the information to distribute within the first week, and that on week 5 information about preventing mold was too late.

Our team was primarily assigned to provide support to the PIO in areas of research, media, communications and public information/education materials. We found that we spent a tremendous amount of time tracking public information materials on topics such as mold, what to do after a flood disaster, water disinfection, etc. We primarily focused on EPA materials but found that we had to default to other agency's materials in topics that we didn't cover. We had to determine what info was relevant, and found some good materials had specific references to Katrina, Ike and Rita rendering the material useless for this response. The useful materials we did find then had to go through FEMA to be approved for distribution. After approval, we found we could not print anything here in the region for distribution to field ops because of some GPO rules regarding printing and procurement. The process took several days from research to approval, to finally printing in headquarters for mailing to the field locations. Meanwhile people were desperately needing information on how to safely begin the cleanup process. Additionally, the need for materials in Spanish and Vietnamese became apparent. The process was even more cumbersome because the request for Vietnamese materials had to go through HQ. The materials they had available on-line were not quality controlled and our R6 Vietnamese expert found the existing translations were very poor and incorrect. Further, the existing Vietnamese information was on higher technical stuff (e.g. ASPECT plane, air monitoring tech info), that was not relevant to the general Vietnamese public affected in incidents like this. It took a lot of time and effort to get this information corrected, resulting in more delays and more confusion as to who was doing what (HQ, their contractor, and our local Vietnamese expert).

We can anticipate the need for public information in these types of disasters will always require handouts for mold, air and water quality, drinking water, etc. regardless of where the location of the incident occurs. Materials should be general enough, not incident or location specific. All of that material should be developed, pre-approved by FEMA and placed in an EPA public information response kit. We had plenty of time between Katrina and Sandy to anticipate that these materials would be needed for the next event yet when the time came, we had to start almost from scratch.

Materials should also be translated and quality controlled in advance. Although HQ has a contractor for translations, it appears that little to no quality control is in place to ensure the translations are correct. Our regional Vietnamese expert even found an instance where an approved and published handout on our web site still had an English sentence in the middle of a paragraph.

It was unclear why the Incident Command Structure (ICS) was not being followed in respect to the Community Liaison's (CLs)? Why was there no Public Information Officer (PIO)? And why was the Community Liaison Coordinator (Janetta Coats) not housed at the same location as the CLs? The failure to follow the ICS structure and not having the Community Liaison Coordinator housed at the same location as the CLs created many authority, direction and power struggle issues for the CLs. Therefore, there were many (in particular Valmicheal Leos (R6), Joann Rogers (R5), Michelle Kerr (R5) and Carol Ropski (R5) who took full advantage of the lack of an on-site leader and assumed the leadership role and/or provided constant negative, rude and unprofessional comments about the Community Liaison's Coordinators ability and knowledge to perform her task. Although Joann Rogers (R5) did provide an excellent suggestion and coordination of the team by organizing and maintaining a daily conference call, her verbal slander and lack of authority towards the Community Liaison's Coordinator (Janetta Coats) should not go unnoticed. Working as a team, she and Valmicheal Leos did everything they could to facilitate an environment where they "acted" as if they were being helpful to the Community Liaison Coordinator while instead providing clear and obvious negative remarks, body gestures and actions that showed they had no respect for the authority. Some like Michelle Kerr (R5) and Carol Ropski (R5) jumped on this team and together forged a campaign to paint a picture that they are the "best of the best" at EPA with clearly more leadership, skills and ability than the person who was placed in charge (Janetta Coats). Witnessing the unprofessionalism of Valmicheal Leos toward Janetta Coats as well as how he often spoke to the CL's was difficult. And hearing Carol Ropski at the end of a daily call shut out "This is Bull!" after the call (suggesting Janetta's daily call was pointless) was rude and extremely unprofessional. Perhaps some of this mockery could have been avoided if the proper ICS structure was used and if the Community Liaison was housed at the same location as the CLs.



In addition, arriving 10 days after the actual hurricane and realizing the Fact Sheets (our primary tool for communication) were still waiting for approval, was extremely disappointing and definitely slowed down completing our task. Then when the Fact sheets were finally approved, we were told we could not print at the EPA Lab. Some ignored this request and printed anyway, while other followed the guidance that was given. This created disparity among the CLs because some now had fact sheets to do the task while others did not. Then the ban was lifted that we could print at the EPA Lab while simultaneously (day 5) we were finally asked to place orders on the number of fact sheets we would need. Not everyone ordered the fact sheets they needed and thus when they finally arrived, CL's who didn't order any fact sheets started taking the Fact Sheets from those who ordered. Since the Fact Sheets were our primary tool in performing our task, it would seem these Fact Sheets would have taken priority and we wouldn't have to fight one another to get them to perform our job.

#### CL's not being in/on the Incident Command Structure

Deploying people with power and/or authority issues is a concern at any emergency incident. They create an environment that is filled with negative energy. The deployment and task are stressful enough (being away from your daily routine) and then adding in negative people who want to act like they are being helpful while they question everyone's ability to perform their assigned task is mentally taxing and decreases productivity.

The delays with all the fact sheet issues definitely causes unnecessary arguments and fights as well as delays in performing the task.

There appeared to be a disconnect between the work of the Community Liaisons and Unified Command (ICS) structure. In addition, for the first 9 days, there was a lack of overall leadership and guidance at the CL reporting locations (Alpha, Bravo and Charlie), which led to EPA staff proactively stepping into leadership/management roles to fill the vacuum.

The CL group asked our representatives in Dallas on several occasions for a list of which county agencies were providing water well testing, how to contact them and what the cost was. We never were provided with this information. I learned after the response that the information was available on EPA's Harvey website. I did look there while deployed but was unable to find the information.

While I understand that this is a disaster response and there are a lot of unknowns, it would have been helpful to have received the CL packet well before we were deployed (at least 2 days). We didn't receive the community liaison packet until after we had arrived and it was over 90 pages. It was not something that was easy to review once we were on site.

When I left R7, I was told I would be staying in Houston for 2 weeks in a hotel. When I arrived, I found out that while I was staying in Bravo, that I would be moving 2 hours away to Beaumont, TX in a trailer. The trailer was fine but it was very far from our team leader in Houston. We only saw our team leader 1 time in person. Also, after we arrived we had been emailed the location and time to report at Bravo. When we arrived, the command post was shutting down and they had no idea that we were coming. They sent us 2 hours away to the command post in Port Arthur. We had no contact information for our team leader Sam Bates and we also just had an address for a mall. When we arrived to the mall, there was no command post. We had to go to the trailers in Beaumont and find another team leader, Mitty, to help us figure out where we were going. Often times, we had no idea who was coming to be a CL and how to manage those people coming in.

Overtime- When deployed, we were told that we would be working a large amount of overtime and we would be working 7 days per week. Due to funding I think, many of our overtime was cut by over 60% and we were asked to take at least 1 day off per week.

I think that if the CLs had been deployed earlier, that there would have been an appropriate size sent. All of the CLs and leaders worked very hard but there were some comments including where we were the first 2 weeks of the disaster. In other words, we could have arrived sooner to these communities. As far as deliverables, we wrote daily reports. It is not known whether the people we reached out to were contacted to resolve their issue.

Some folks that were deployed did not have any ICS training.

Not enough Community Liaison (CL) personnel were deployed to the Alpha - Corpus Christi area which undermined the effectiveness of the CL personnel that were deployed to the area. The original two CL folks deployed to Alpha, established a presence in FEMA DRCs that we were unable to staff due to the limited amount of staff in the area.

The leader of the Community Liaison folks in Dallas sent unclear direction to folks in the field and I did not feel listened to when concerns were raised. There should have been more coordination between the ALPHA Command Post and the Community Liaison leader in Dallas, instead we were told not to give them information or coordinate with them in any way. The Liaison Officer in Alpha needed to know what CL folks were doing in her area in real time. I was not allowed to share written reports with her. Written documentation should have been provided earlier in the response. Many folks in hard hit areas did not have internet access and were unable to obtain or print out the documentation. Approval of the flyers should have happened earlier in the response.

Lack of EJ component in the incident command structure Not all CLs were sensitive to the needs/concerns of EJ communities EOCs were not prepared and did not necessarily understand the need and purpose of the CLs. Lack of printed materials (and lack of printed materials in needed languages) to disseminate in the impacted areas.

Since nobody had previous experience as a community liaison we all had to work out our own plan to cover our assigned areas. Each team had a different way of completing the task which led to teams doing different activities. Some spent quite a bit of time planning locations to visit when in reality all of the locations planned did not need to be visited.

My concern is the timing of the Community Liaison activation. From my knowledge and talking with other government groups, municipalities and local groups, we probably should have deployed as soon as possible after the disaster. The first Community Liaisons did not get to Corpus Christi until well after 2 weeks post hurricane Harvey. We were giving out information for mold clean up, boil water, septic systems. The information we had to give could have been distributed much sooner. We could have been there shortly after the hurricane to help identify the needs of the community. By the time we arrived, mold had already taken over most homes. The information we provided could have helped people quicker in their time of need.

Need clearer definition of role for CL's – seen more as a PR thing rather than accomplishing something

Need to have plan up front as to where to go and what to do: Targeting of specific groups/places; How to get flyers versus copying them at Lab; and What are the goals

Ensure team leads are prepared and are doing all they need: Messaging; Timesheets; and Orientation/Safety Training

Match skills to jobs – Introverts do not make good CL's

GEN · Working in **Unified Command** with three branches, two **not co-located** with Unified Command.  
REO **Assistant PIO's in other branches** would be recommended in the future for a large response. We  
C met that need and staffed accordingly, but just more of a lessons learned.

CIC?

GEN · Having **Unified Command**, three branches, as well as the EPA REOC and **EPA EOC**, brought  
REO unique challenges. I had a grasp of my responsibilities of who to share what with within EPA but  
C found it difficult getting explaining and getting **“buy-in” from other agencies within the Unified**  
CIC? **Command** who expected to see more of a strict “within” Unified Command review-release process  
for distribution of communications materials, statements and responses.

GEN · I noticed a need for the IMAT to cover a newer function within the IC, which is that of the  
REO **USCG photographers**. They were a great resource, but when I arrived they were **listed as PIOs**  
C throughout the branches, which I found to cause a lot of confusion and took days to clarify their  
CIC? roles and duties to folks within the structure.

REO · It seems like the only way to **get information to the public** in the early days of a disaster is with  
C flyers distributed by outreach teams. Getting up-to-date material printed and into the hands of the  
CIC people who need to distribute it is a constant problem. Also, there are **restrictions on the amount**  
**of material that can be printed** due to rules that make scene under normal operations, but are  
major barriers when people's lives' are at stake. There were also delays getting approval for out-of-  
date material that had to be updated and approved.

REO · In a **disaster, we need a mobile printing plant** with either GPO personnel who can print what  
C we need as we need it, or a **waiver from unrealistic rules** that make no sense during a disaster. The  
CIC mobile printing plant needs a generator that can power printing equipment even if there is no  
power, which seems to be the norm in most disasters. If we can't arrange a mobile printing plant,  
then there needs to be one in place in the mobile command post with all printing waivers in place.  
There also needs to be a requirement for annual review of all disaster-related material that might be  
needed during a disaster or emergency. **Keeping material up-to-date should be part of ongoing**  
**training for PIAT members.**

GEN · An area of concern is coordination w/partners, (FEMA). **FEMA providing information to**  
REO **residents with little or no knowledge of the information or problem.** FEMA claims they have  
C someone at the centers doing the same work EPA is doing. Information flow to impacted residents  
CIC? be conducted at FEMA center after consultation with local officials. Incorrect personnel with no site  
work experience and no basic community involvement training. Residents asked water, indoor air  
and yard cleanup questions.

## OPERATIONS GENERAL

### What worked well?

- Region 6 Houston lab and its staff were great resources for the mobilization. They were able to provide power, security, delivery address for gases, etc. for the TAGA laboratories. OSC Enders was with the TAGA and provided a means to collect information when unavailable through the ICS.
- Pre-planning with State and USCG. Pre-selection of possible command post sites.
- Years of planning/training under NDOW paid off. Integrating with the TCEQ Houston office DW & WW staff was seamless. Working under Zehner (Branch Director) and Rhotenberry (Deputy) was easy. EPA Region 7 staff were excellent additions. Contractor support in entering all DW and WW site assessments at end of the day. My three group supervisors were outstanding (none had the requisite ICS position-specific training but no one could tell) Our field teams were extremely capable as well as patient when having to make sudden (and often) changes. Texas State Guard was a great asset to our teams.
- The coordination with USCG seemed very smooth. I was very impressed.
- UC formed strong bond and utilization of NDOW products and principles very effective and efficient
- Having an OSC on board help considerably with communications with Dallas and the other operational centers with the Roles/Responsibilities, Coordination w/ partners, line of command, tactics.
- Houston Laboratory was a great asset – security, power, infrastructure, etc. for the mobile laboratories and the personnel.
- Data flow was near real time, pertinent, and appropriate using the VIPER system as a means to push out the spatial and temporally coordinated air monitoring data and geographical positioning information.

### What is an area of concern?

- iPads without GPS capability – cost of not having it was huge and caused days of work to correct work that had already been done.
- The I-Pads were not always accurate for LAT-LONG;

- I did spend about 4 days in Houston at the waste collection pad. I believe crews had been getting encouraged to collect orphan containers and once they were placed at the staging area they were segregated. Unfortunately, there were about 140 unknowns they were simply put into their one group and not screened for hazardous waste characteristics until the end of the response. Not only should these unknowns have been screened for waste characterization and determination of waste streams (speeding up the disposal process), they should have been screened so they could be segregated to insure incompatible materials were not stored in the same area.

- If you want consistency between normal response and disaster response then OPS should actually have experience with contractors/normal logistics  
ICS chain – requests/directions were provided by members outside of the chain.

## Operations - Debris

### What worked well?

My deployment package.

Met great EPA people and a few (very few) good TECQ people

### What is an area of concern?

- The work with TCEQ on temporary debris sites was not coordinated well and was uncomfortable. The EPA role there was undefined and vague.
- Poor definition of the specific tasks that were to be accomplished by the debris inspectors.
- Clear line for reporting outside of the Alpha branch was not clarified until after inspectors were in field.
- Poor coordination with TCEQ on the scope of the inspector tasks.
- The EPA's roles and responsibilities were not clearly defined during the coordination of the TCEQ landfill inspections. The assigned work was successfully accomplished.
- Although it was the nature of the task, I believe that frequent short notices and changes to the trip caused few last-minute changes in the airlines reservations and hotel reservations. And with that there was frequent change in planning with the State's observer.
- I heard from the debris staging observers that they were unclear who they reported to at times and that some of them had bad experiences with TCEQ being rude to them. I hope this improved. I think they were frustrated because they felt like the EPA folks were stepping on their toes. I think we need to perhaps make sure TCEQ explains our mission to their staff so that the staff do not feel threatened when we are there to help.

Safety and communication.

Some people visiting the landfills where not aware of the danger of the heavy equipment.

Lack of communication and organization at TECQ. Many days we left the office at 10 or 11am waiting for TECQ to get their assigned list of landfills to visit.



Also, EPA employees were asked to get out the room so TECQ could talk about logistics and in one occasion they conducted the safety briefing only to their employees and left out EPA employees.

TECQ were very secretive and made us feel unwanted.

EPA employees didn't have much information about their roles working with TECQ.

Increase of cost for having the EPA employees waiting for hours before leaving to visit the temporary land fields.

TECQ should have better organization and communication.

EPA Region 6 should have clarified EPA's employees roles when we were assigned to work with TECQ.

## WATER OPERATIONS

### What worked well?

- Thought our immediate supervisors on the water team were good, gave good direction and listened to feedback. Working with TCEQ on the water side worked well, they knew the systems and area better than we did.
- Mark McCasland was a great leader/Staff assigned worked well together/Maps with locations for each day/Correct addresses and contact information/Contractor to enter data at end of day
- The system that was in place worked well. The plans given to us by the supervisors were very helpful. Working with the Texas Commission on Environmental Quality was a great idea. The line of command and tactics was clear and concise. Meaning that, we knew just who to contact for specific information. The level of response was very organized
- The mobilization from Region 7 was not well-coordinated. Departures were not communicated well. Once I got there, the command could not have been more well-organized. The leadership of Mark McCasland, Robert Houston, and Meaghan Brasnahan was incredible. All of our calls from the field were answered promptly and we never felt out-of-touch from command. The documentation in the form of the assessment sheets were well-organized and provided a simple checklist that was easy for the assessors to follow, even if they weren't experienced drinking water staff. The level of response was perfect and the assessors worked at the peak of their skills and time available to get the job completed as soon as possible.

### What is an area of concern?

- We were late getting some instructions on our approach that would have been helpful up front. We received an "SOP" very late in the deployment. Perhaps those that came Tuesday were better informed than those of us that came Wednesday.

- Lack of address, gate coordinates, or good contacts, no map (this was the case for too many of the sites)/Looking for non-existent sites because they had not yet been built/Sites not sorted for types of sites to assess. Staff “assessed” several oil/water separators (such as at a car wash). Or inability to sort?/Seemed that state staff assigned to IC were not truly under the IC hierarchy but still had to answer to immediate supervisors rather than focus on the response for a designated period of time./Not knowing what proper gear to bring. Staff did not know they would be going to chemical facilities for WWTP and needing fire retardants.

- Ensuring the office staff who put together the data for the field staff know what they are doing, and ensuring the data base is up to date with all information needed to do the work effectively. Even good staff are only as good as the database they are working from.

- I think that the mission could have been accomplished faster and more efficiently if those with limited knowledge and experience of drinking water wells were paired with those of stronger backgrounds.

- The use of updated navigation systems for each team would make completing projects more efficient. We spent a lot of time in traffic. The use of an updated navigation could have reduced the amount of time spent in traffic.

- One area of concern was that we had to use our personal smart phones almost constantly to complete the assessments. They were used 3 ways: 1) to locate the GPS of the assigned PWS through the TCEQ SDWIS-State 2) to call the operator or administrator to discuss the PWS 3) to map the driving directions to the PWS. Every assessor and partner used their personal smart phones and data plans. This should be considered the next time there is a disaster, so that smart phones, tablets, or some other form of connection is provided and the assessors don’t have to use their personal devices

· The black dot usually represented no answer after called it would be unknown. But after called we really should have been selecting the choice, OUT, instead of unknown. Out meant a call was made and there was a message left. Unknown really should have been for a call with no message. This was later realized but since everyone had been entering unknown after leaving a message that is what we were told to continue to do. Some of the facilities that we called were not never built and some were built but they were not online. I would recommend a selection be added to the last question in response manger to be not built and another selecting being not in use, meaning that it was not being used at the time on the incident. Also, in preparing beforehand something TCEQ could do every year is make a call sheet in advance in case they will need it in the future. But when they make this call sheet to have all the facilities managed by the same owner filtered, SO THAT they don't receive multiple calls. Wastewater eventually started filtering in this way so that the contact that had 10, 30 or even 50 facilities could be emailed the questions, I WILL ATTACH THIS BLANK EXCEL QUESTIONNAIRE. Having the complete list of contacts ahead of time would help and drinking water facilities along with wastewater facilities were handled by the same contact at times but these facilities were being called separately. Calling drinking water and wastewater separately is not the most efficient way to get information (when the drinking and clean have the same contact many times). The drinking and clean water facilities should be combined and filtered by contacts so that they are grouped by who is in charge and that contact must only be contacted once for all their system, either by email or by phone. Also, this large list in a time during an incident should be divided up from the beginning into sections of 500 and given to those that are calling systems. No one else EPA or TCEQ should have any of the same systems or contacts to call, this will avoid calling people multiple times and save time and repeat work. If the list is divided properly from the beginning everyone will be assigned the same number of systems to call and after they have contacted their 200 or 300 assigned to them they are done with their job. Assigning a certain number to each person means everyone will be calling the same (or emailing) amount of systems and once they have heard back from all their systems their job is complete and they can leave.

- Having a properly filtered list that include waste and drinking would be ideal with contacts divided up when they have multiple systems. Coordinating with the TCEQ Regional Offices such as REGION 12 is a must because they did not begin calling the first couple days but they later did and they at many times called the same systems that were already in response manger as green. If they were green it meant they did not need to be contacted they were okay. In response manger and while looking at the forms Region 12 filled out many times the Regional TCEQ office called the same system with two different people when EPA had already marked them as green before they called which means that system eventually received calls from three different people asking the same questions. That is not efficient. It would save money and time if the list was properly divided and coordinated between all of TCEQ headquarters in Austin, EPA and the TCEQ Regional Offices.

- Having the complete list of contacts ahead of time would help and drinking water facilities along with wastewater facilities were handled by the same contact at times but these facilities were being called separately. Calling drinking water and wastewater separately is not the most efficient way to get information (when the drinking and clean have the same contact many times). The drinking and clean water facilities should be combined and filtered by contacts so that they are grouped by who is in charge and that contact must only be contacted once for all their system, either by email or by phone. Also, this large list in a time during an incident should be divided up from the beginning into sections of 500 and given to those that are calling systems. No one else EPA or TCEQ should have any of the same systems or contacts to call, this will avoid calling people multiple times and save time and repeat work. If the list is divided properly from the beginning everyone will be assigned the same number of systems to call and after they have contacted their 200 or 300 assigned to them they are done with their job. Assigning a certain number to each person means everyone will be calling the same (or emailing) amount of systems and once they have heard back from all their systems their job is complete and they can leave.

- Water desk in the REOC needed to be setup immediately (took many days or so it seemed). We need training for several staff where it is not only our section chief doing the majority of the tasks.

- Need training for DW/WW staff who could be called upon to staff an ESF desk in a state EOC as an infrastructure liaison(?). One of our staff was pulled to do this while still in Austin (night shift).

- Need more DW/WW staff trained as group supervisors. The ones I recruited on the fly got OJT and were excellent in handling their teams though. DW and WW teams not always completing assessment forms completely – made data entry into RM difficult at times for our contractors. Getting management reports out of Response Manager
- Communication between TECQ and EPA could have been better. The TECQ office was falling behind on relaying quality information to the teams in the field. Topographic (With info on elevation of areas investigated) maps also would have proved extremely helpful and made the process more efficient.
- Wasted time and money. We were going to check on water systems that were well outside of the flooded areas...
- Pre-install Response Manager to the Water Infrastructure Team members' laptops weeks/days prior to deployment. Some laptops may require IT to issue administrator rights.
- Identify clear definitions and examples of Drinking Water and Wastewater codes that are in Response Manager. Possibly identify real-life situations.
- Offer ability to provide real-time data. Response Manager is not accurate and many man-hours are needed to generate codes to manipulate to data to identify facilities that need follow-up. Quick fix is to generate codes to obtain accurate data for the next day.
- Offer webinar/training for teams that may participate in Drinking Water and Wastewater assessments, including Region 6 staff, Region 7 (back-up to Region 6), Texas State Guard, etc.